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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Amendments of Parts 1, 2, 22, 24, 27, 90, and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters, WT Docket No. 10-4 – Ex Parte Communication

Dear Ms. Dortch:

MetroPCS Communications, Inc. ("MetroPCS"),[1] by its undersigned counsel, hereby respectfully submits this written ex parte communication urging the Commission to prohibit all signal boosters that are not certified prior to their operation by the licensee of the underlying network on which the device is to operate. To implement this policy, the Commission should adopt the signal booster certification requirements proposed by AT&T.[2] Adoption of AT&T's proposed certification requirements will reduce and, hopefully, eliminate the interference that otherwise would be caused by unauthorized signal boosters.

In addressing this issue, the Commission should start from the proposition that signal boosters are unauthorized transmitters that operate on spectrum exclusively licensed to another. In most instances, the licensee has paid a market price, either at auction or in the secondary market, for the license, and that price reflects a premium based upon the fact that the licensee is entitled to the exclusive use of the spectrum. Given this market reality, the Commission should not be bending over backwards to permit unauthorized and uncertified signal boosters, but rather should be considering whether there are circumstances in which the public interest would be served by allowing signal boosters to be certified by the licensee. In the final analysis, a licensee should be permitted to deny the use of signal boosters since the licensee is the appropriate steward of the spectrum that has been licensed to it. For example, the

[1] For the purposes of this ex parte communication, the term "MetroPCS" refers to MetroPCS Communications, Inc. and all of its FCC license-holding subsidiaries.

[2] See Letter from Jeanine Poltronieri, AT&T Inc., to Marlene S. Dortch, Secretary, FCC, WT Docket No., 10-4 (filed January 26, 2012) ("AT&T January 26 Ex Parte").

licensee will be held accountable, and deemed the responsible party, particularly by consumers, if the customer's service is subject to interference. Therefore, the licensee should be allowed to maintain effective control over all transmitters using the spectrum within the license area.

The concept that a licensee is responsible for each device operating over its network is a familiar one. At present, each mobile station operating on a wireless network does not need a separate license, but rather operates under the system operator's blanket license.[3] It follows that the Commission should not allow third parties to sell or operate transmitters on a carrier's system absent that carrier's express consent. This is particularly true since the Commission has a statutory obligation to prevent interference.[4] As such, any decision to allow third party transmitters, such as signal boosters, in spectrum exclusively allocated to a licensee must ensure that such devices will not interfere with other users.[5] Here, the proponents of a rule that would allow signal boosters on exclusively licensed spectrum on any basis other than at the direction or authorization of the existing licensee have completely failed to demonstrate that such an intrusion into the exclusive rights of the licensee is necessary or would serve the public interest. Accordingly, the Commission must reject any proposal allowing such devices unless the licensee has expressly authorized such device.

Unauthorized Signal Boosters Present Significant Interference Problems to Wireless Networks

The record in this proceeding is rife with evidence reflecting serious concerns about the use of signal boosters, and highlights the need for swift Commission intervention. Signal boosters that are poorly designed, improperly installed, or that are defective, have been shown to cause interference to both commercial and public safety networks. In 2006, CTIA released a white paper on the detrimental impacts of unauthorized signal boosters focusing on the "harmful and costly interference to licensees' operations – resulting in severely degraded mobile wireless services for impacted consumers."[6] CTIA's report was the first – of many – to demonstrate that unauthorized signal boosters present serious problems to wireless networks. Unfortunately, six years later, the same issues still persist, and the negative impact of signal boosters continues to grow.

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[3] See Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, Second Report and Order and Second Memorandum Opinion and Order, 19 FCC Rcd 24558, ¶ 76 (2004) (noting that "[t]he typical blanket or wide-area licensing scheme allows individual customers/users to operate within a network without benefit of individual licenses, and the network operator is the sole licensee, as is done, for example, in the cellular wireless service.").

[4] 47 U.S.C. § 303(f).

[5] Interestingly, the Commission prohibits devices which jam signals of licensed operators. Jammers "can prevent 9-1-1 and other emergency phone calls from getting through or interfere with police and other law enforcement communities." FCC Enforcement Advisory on Cell Jammers, GPS Jammers and Other Jamming Devices, DC 12-347 (rel. Mar. 6, 2012). A signal booster which is unauthorized has no practical difference from a jamming device, especially when the booster in fact interferes with the licensee's system. Just as jamming technology does not discriminate between desirable and undesirable communications, signal booster interference affects all communications as well.

[6] CTIA – The Wireless Association, White Paper on the Harmful impacts of Unauthorized Wireless Repeaters, at 1 (May 1, 2006) http://files.ctia.org/pdf/CTIA_Repeater_White_Paper_Final_050106.pdf

Interference from unauthorized signal boosters continues to cause problems that significantly disrupt wireless systems. This booster interference has the potential to increase instances of dropped calls and loss of coverage, may reduce the battery life of cell phones, and can prevent customers from contacting critical emergency services, such as E911. Commercial Mobile Radio Service ("CMRS") providers have been dealing with the negative impacts of signal boosters for many years. Indeed, AT&T previously has informed the Commission that it has suffered significant disruptions due to signal boosters, such as an incident that "caused substantial harmful interference to six AT&T towers in Florida, lasted for 21 hours, and led to 2,795 dropped calls and 81,000 blocked or impaired calls."[7] US Cellular has proffered similar evidence of interference where an RV rally using unauthorized boosters made it difficult for customers to place or receive calls over a four day period. This incident required hundreds of technician hours in an attempt to locate the problem.[8] As a result, US Cellular had to credit free months of service to numerous affected customers in addition to having to spend thousands of dollars to identify the signal boosters.[9] As AT&T has explained, fixing a signal booster interference problem is no easy task, as "tracking down unregulated and unregistered interfering signal boosters often amounts to finding a needle in a haystack."[10] US Cellular's experience confirms AT&T's view of the complexity of resolving these problems.

In addition, consumers have no way of knowing that their reduced ability to use their mobile devices resulted from an interfering signal booster, and they may wrongly assume that it was their carrier's fault.[11] Frustrated consumers may deplete carrier customer service resources with large numbers of complaints, resulting in a loss of carrier goodwill. Indeed, unless a provider takes additional measures to credit their customers for the loss of service and inconvenience, as US Cellular did, dissatisfied customers may very likely cancel their service all together. This concern is enhanced for a no-contract provider like MetroPCS where customers can terminate their service without penalty. MetroPCS must consistently satisfy its customers, and signal booster interference may significantly damage MetroPCS' relationship with its customers.

Signal Boosters Should Be Certified And Regulated By The Carrier On Whose Network The Booster Will Be Operated

It is likely that the use of illegal signal boosters will only increase in popularity as more consumers "cut the cord" and go wireless-only. However, signal boosters do not have to be a problematic technology and may have uses which are helpful to the public. For some individuals in rural areas, who

[7] Reply Comments of AT&T, Inc., in WT Docket No. 10-4; File No. EB-07-SE-390, at 10 (filed Mar. 8, 2010) ("AT&T Reply Comments"). AT&T does not specify how many E911 calls or other calls to emergency or public safety personnel were not completed as a result of such interference.

[8] Since signal boosters are not registered, carriers must use triangulation and other techniques to identify the problem, costing these carriers thousands of dollars. This problem is further exacerbated when the signal booster is operated only intermittently or is mobile.

[9] US Cellular Comments in WT Docket No. 10-4, at 5-6.

[10] AT&T Reply Comments at 7.

[11] A particularly ironic fact is that the customer using the signal booster may actually cause interference with their own device.

may find themselves with limited wireless network coverage, signal boosters may assist in their transition to a wireless-only household.[12] In addition, advanced smartphones enter the market every day, often with a disappointing battery life that is unsatisfactory to consumers.[13] In some instances, authorized signal boosters can act as a solution to both of these problems: boosters may assist in areas with coverage gaps, and also have the ability to improve battery life by limiting the amount of time that customers' handsets spend searching for stronger network signals.[14] However, these solutions can also exacerbate the problems if the signal boosters are unauthorized or interfere with the existing network. And, if the Commission begins providing authorization for signal boosters that have not been properly tested and certified by carriers, use of these devices may proliferate and the harm caused by such proliferation could outweigh any potential benefits. As more signal boosters are purchased, installed and controlled by consumers, more interference problems will result, and the Commission must take action now to prevent this increased interference.

For instance, femtocells, another technology which offers great promise to improve the customer experience, are certified by the licensee and are controlled by the licensee through the broadband connection attached to the femtocell. If a femtocell starts to interfere with the licensee's system, the licensee has a ready ability to know which femtocell is interfering through its connection with the femtocell and can quickly turn it off using the broadband connection. The current signal boosters, on the other hand, operate as separate autonomous devices without any attachment to the licensee's network, and in some cases amplify all signals, not just those which they were purchased to amplify. Further, femtocells are stationary while signal boosters can be mobile, increasing the difficulty in determining the source of the interference.

It is for these reasons that MetroPCS recommends that only regulated and certified signal boosters be permitted to operate over the certifying carrier's network.[15] Under this framework, a device would only be certified by a carrier, or the Commission, if it meets, at a minimum, the requirements specified by AT&T in its recent ex parte letter to the Commission.[16] MetroPCS supports AT&T's proposal that the signal booster be designed to provide each licensee full control over the device on whose network the

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[12] As the Commission has recognized on numerous occasions, "coverage gaps exist within and at the fringes of [] service areas and continue to pose a problem . . ." In the Matter of Amendments of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters, WT Docket No. 10-4, Notice of Proposed Rulemaking, ¶ 1 (rel. Apr. 6, 2011) ("Signal Booster NPRM").

[13] See Greg Bensinger, Fast Phones, Dead Batteries, WALL STREET JOURNAL, (Feb. 6, 2012), available at http://online.wsj.com/article/SB10001424052970204369404577205001921978364.html.

[14] See Signal Booster NPRM, at ¶¶ 1, 6; see also Lynn La, Need a boost? Signal booster for 4G phones will debut at CES, CNET.com, (Jan. 5, 2012), http://ces.cnet.com/8301-33370_1-57353435/need-a-boost-signal-boosters-for-4g-phones-will-debut-at-ces/.

[15] Other parties also support rules that require signal boosters be registered with the licensee of the wireless network that it will be used on. See e.g., Sprint Nextel Ex Parte in WT Docket No. 10-4 (filed Mar. 8, 2012); T-Mobile Ex Parte in Docket No. 10-4 (filed Feb. 17, 2012). It is also important that the signal booster be designed to generate only on single carrier's frequencies in an area and the formats used on that spectrum and not boost multiple carrier systems as it is difficult to isolate such interference.

[16] See AT&T January 26 Ex Parte.

signal booster is proposed to be operated on just like a femtocell. Carriers must not be forced to suffer the unauthorized interference of devices, like signal boosters, which they have not vetted for performance over their network.[17]

As AT&T has indicated, ultimate licensee control over signal boosters operating on their networks is paramount.[18] Carriers must be able to promptly locate and shut down any interfering signal booster, something that currently could take days to accomplish, if at all. MetroPCS further supports AT&T's recommendation to require booster monitoring of affected cell sites with the ability to lower the power of the booster in cases of potential interference, as well as coupling the booster with the device to be amplified and finally ensuring that boosters have meaningful oscillation control.[19] Adoption of these requirements will ensure that carriers have appropriate control over the devices that operate over their licensed spectrum, and will ensure that customers do not suffer unauthorized interference from signal boosters.

Any questions regarding this notice should be directed to the undersigned.

Sincerely,

/s/ Carl W. Northrop

Carl W. Northrop
of TELECOMMUNICATIONS LAW PROFESSIONALS PLLC

cc (via email): John Leibovitz
Roger Noel
Joyce Jones
Tom Derenge
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David Siehl
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[17] The Commission has found that certain altered devices which are "not authorized by the carrier, would . . . not fall within the licensee's blanket license, and thus would be unlicensed transmitters in violation of Section 301 of the Act." *Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services*, Report and Order, 9 FCC Rcd 6513, ¶ 60 (1994).
[18] AT&T January 26 Ex Parte at 2.
[19] Id.